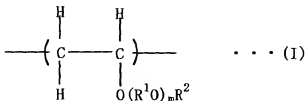


CLAIMS

1. A process for producing a high purity compound having oxygen selected from a group consisting of high purity polyvinyl ether compounds, high purity polyalkylene glycol compounds, high purity polyol ester compounds, high purity cyclic polyether compounds and high purity carbonate compounds, comprising a step of treating with an adsorbent¹ at least one crude compound having oxygen selected from a group consisting of crude polyvinyl ether compounds, crude polyalkylene glycol compounds, crude polyol ester compounds, crude cyclic polyether compounds and crude carbonate compounds.

2. The process according to Claim 1, wherein the polyvinyl ether compound is a compound having a constituting unit represented by general formula (I):



wherein R¹ represents a divalent hydrocarbon group having 1 to 10 carbon atoms which may be branched, R² represents a monovalent hydrocarbon group having 1 to 20 carbon atoms which may be branched, m represents numbers giving an average value in a range of 0 to 10, R¹O's may represent the same group or different groups when more than one R¹O are present, and R¹, R² and m may be the same with or different

from each other among constituting units.

3. The process according to any one of Claims 1 and 2, wherein the adsorbent is an oxide of at least one metal selected from a group consisting of aluminum, iron, titanium, silicon and tin, a clay mineral, activated carbon or an ion exchange resin.

4. The process according to any one of Claims 1 and 2, wherein the adsorbent is activated carbon, silica-alumina, activated clay, bentonite, zeolite or activated alumina.

5. A lubricating oil which comprises a high purity polyvinyl ether compound obtained in accordance with the process described in any one of Claims 1 to 4.

6. A lubricating oil which comprises at least one high purity compound having oxygen selected from a group consisting of high purity polyalkylene glycol compounds, high purity polyol ester compounds, high purity cyclic polyether compounds and high purity carbonate compounds which are obtained in accordance with the process described in any one of Claims 1, 3 and 4.

7. A lubricating oil which comprises a high purity polyvinyl ether compound which is obtained in accordance with the process described in any one of Claims 1 to 4 and has a volume specific resistance of 10^{14} Ω cm or greater at 30°C.

10070820-031102

2
cancel

8. A lubricating oil which comprises at least one high purity compound having oxygen selected from a group consisting of high purity polyalkylene glycol compounds, high purity polyol ester compounds and high purity carbonate compounds which are obtained in accordance with the process described in any one of Claims 1, 3 and 4 and have volume specific resistances of $10^{12} \Omega\text{-cm}$ or greater at 30°C .

9. The lubricating oil according to any one of Claims 5 to 8 which is used for refrigerators.

10. The process according to Claim 1, wherein the step of treating at least one crude compound having oxygen with an adsorbent is a step of bringing at least one crude compound having oxygen into contact with the adsorbent.

505
cancel

11. The process according to any one of Claims 1 to 4 and 10, wherein the crude polyvinyl ether compound has a volume specific resistance smaller than $10^{14} \Omega\text{-cm}$ at 30°C and the high purity polyvinyl ether compound obtained after the treatment with a adsorbent has a volume specific resistance of $10^{14} \Omega\text{-cm}$ or greater at 30°C .

add
B₃

12. The process according to any one of Claims 1 to 4, 10 and 11, wherein the crude polyvinyl ether compound has a weight-average molecular weight in a range of 150 to 3,000.